What is claimed is:

1. A solid electrolyte comprising a composition represented by Formula 1 below:

aLi_2O-bB_2O_3-cM-dX (1)

wherein M is at least one selected from the group consisting of TiO_2, V_2O_5, WO_3, and Ta_2O_5;

X is at least one selected from LiCl and Li_2SO_4;

$0.4<a<0.55$; $0.4<b<0.55$; $0.02<c<0.05$; $a+b+c=1$, and $0 \leq d<0.2$.

2. The solid electrolyte according to claim 1, wherein *a* is in the range of 0.45 to 0.52, *b* is in the range of 0.45 to 0.52, *c* is in the range of 0.03 to 0.04, and *d* is in the range of 0.001 to 0.15.

3. A method for preparing a solid electrolyte comprising a composition represented by Formula 1 below:

aLi_2O-bB_2O_3-cM-dX (1)

wherein M is at least one selected from the group consisting of TiO_2, V_2O_5, WO_3, and Ta_2O_5;

X is at least one selected from LiCl and Li_2SO_4;

$0.4<a<0.55$; $0.4<b<0.55$; $0.02<c<0.05$; $a+b+c=1$, and $0 \leq d<0.2$,

the method comprising:

(a) mixing a Li_2O precursor compound; B_2O_3; and at least one compound selected from the group consisting of TiO_2, V_2O_5, WO_3, and Ta_2O_5, followed by milling;

(b) heating the resultant powder mixture so that the Li_2O precursor compound is thermally decomposed into Li_2O;

(c) heating the resultant mixture to obtain a uniformly molten glass; and

(d) quenching the molten glass to obtain a glassy solid electrolyte.

4. The method according to claim 3, further comprising adding at least one selected from LiCl and Li_2SO_4 to the mixture of step (a).

5. The method according to claim 3, wherein in step (b), Li_2O is decomposed from the Li_2O precursor compound at a temperature of 600 to 800℃.

6. The method according to claim 3, wherein in step (c), the molten glass is obtained at a temperature of 900 to 1,500℃.

7. The method according to claim 3, wherein in step (d), the molten glass is quenched at a temperature of 0 to 25℃.

8. A lithium battery using a solid electrolyte comprising a composition represented by Formula 1 below:

$$aLi_2O\text{-}bB_2O_3\text{-}cM\text{-}dX \quad (1)$$

wherein M is at least one selected from the group consisting of TiO_2, V_2O_5, WO_3, and Ta_2O_5;

X is at least one selected from LiCl and Li_2SO_4;

$0.4<a<0.55$; $0.4<b<0.55$; $0.02<c<0.05$; $a+b+c=1$, and $0 \leq d<0.2$.

9. A thin film battery using a solid electrolyte comprising a composition represented by Formula 1 below:

$$aLi_2O\text{-}bB_2O_3\text{-}cM\text{-}dX \quad (1)$$

wherein M is at least one selected from the group consisting of TiO_2, V_2O_5, WO_3, and Ta_2O_5;

X is at least one selected from LiCl and Li_2SO_4;

$0.4<a<0.55$; $0.4<b<0.55$; $0.02<c<0.05$; $a+b+c=1$, and $0 \leq d<0.2$.